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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,571	09/11/2001	Kenneth R. Chien	041673-1001	7236

30542 7590 07/17/2006

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EXAMINER	
KAUSHAL, SUMESH	
ART UNIT	PAPER NUMBER
1633	

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 09/954,571	Applicant(s) CHIEN ET AL.	
	Examiner Sumesh Kaushal Ph.D.	Art Unit 1633	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 13 June 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *70-72 and 77-97*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☒ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

Sumesh Kaushal
Primary Examiner
Art Unit: 1633

Continuation of 5. Applicant's reply has overcome the following rejection(s): Claim 80-82 and 84-85 under 35 USC 112(1) regarding New matter Written description .

Continuation of 11. does NOT place the application in condition for allowance because: Claims 70-72 and 77-97 stand rejected under 35 U.S.C. 112, first paragraph, for the same reasons of record as set forth in the office action mailed on 2/15/06. The applicant argues that invention as claim is not a therapeutic result but instead an increase in transduction efficiency of a set of genes. The applicant argues that efficacy of the genes in achieving a therapeutic result is therefore only marginally relevant if at al to the question of whether the invention as claimed is enabled. The further argues that the specification enables use of the invention particularly in the context of treating heart failure wherein the mutant phospholamban molecules used to suppress the physiologic phospholamban inhibition of SERCA2 activity. However, applicant's arguments are found not persuasive because as stated earlier the scope of invention as claim is not limited to "heart failure" but encompasses any "cardiac disease" (see claim 70). The only disclosed utility of the instant method is the treatment of a cardiac disease. Thus even though one skilled in the art is able of deliver the asserted gene into the heart of a patient it is unclear how one skilled in the art the would "use" the invention as claimed without further undue amount of experimentation especially in context a cardiac disease. At best the specification teaches "intra-coronary administration of the AdenoS16EPLB" significantly enhanced "cardiac contractility" indicated by an approximately 33% increase in mean velocity of circumferential fiber shortening (mVcf) 6 days after transfection (example-7). Besides increasing "cardiac contractility by an intra-coronary administration" of the AdenoS16EPLB, the specification fails to disclose the treatment of "any other cardiac disease" caused by factors other than phospholamban and SERCA-2 interaction. Furthermore besides the S16EPLB the specification fails to disclose that any other transdominant negative phospholamban which is capable of treating any cardiac disease. The earlier office action provided a clear evidence that the "phospholamban hypothesis" in heart failure is complex and highly unpredictable, (see Armand et al CARDIOVASC RES. 62(3):439-41. 2004, Janczewski et al CARDIOVASC RES. 62(3):468-80, 2004). For example it is unclear how one skill in the art would treat a cardiac disease like hypertension or coronary artery disease by administering any mutant phospholamban gene, any fragment thereof or any other gene (as claimed) to the cardiac muscles. The RAC advisory panel clearly emphasized the need for a greater understanding of an underlying mechanism that contributes to a disease along with the pathogenesis of the disease. In addition, besides the use of a phospholamban transdominant negative mutant "S16EPLB" the specification fails to disclose any other phospholamban mutant, which is capable of modulating SERCA-2 activity leading enhanced cardiac contractility. The treatment of any cardiac disease via a gene based therapy is not considered routine in the art and without sufficient guidance to a specific cardiac disease or disorder in context of phosholamban gene the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. see in re wands 858 f.2d 731, 8 uspq2nd 1400 (fed. cir, 1988).